

What is claimed is:

1. A spindle motor comprising:

a chassis;

a rotor magnet;

5 a rotor-side bearing member;

a rotor hub having a hollow circular hole and disposed to the center of rotation;

a support column secured to the chassis; and

10 a stator having a wound coil and disposed to the chassis in a position confronting the rotor magnet,

wherein the support column is disposed to the chassis in a manner to pass through the hollow circular opening in the rotor hub,

the rotor-side bearing member forms a bearing for supporting the rotor hub in combination with a stator-side bearing member disposed
15 to the chassis, and

the bearing is disposed to a position of a certain distance from the support column.

2. The spindle motor according to claim 1, wherein the bearing
20 comprises a fluid bearing provided with:

a thrust bearing having a dynamic pressure generating groove formed in any of two axially confronting surfaces of the rotor-side bearing member and the stator-side bearing member, and

a radial bearing having another dynamic pressure generating
25 groove formed in any of two radially confronting surfaces of the rotor-side bearing member and the stator-side bearing member.

3. The spindle motor according to any of claim 1 and claim 2, wherein the rotor hub and the rotor-side bearing member are formed integrally.

5 4. The spindle motor according to any of claim 1 through claim 3, wherein the support column retaining the stator-side bearing member comprises a flat portion and a cylindrical portion, and the flat portion and the cylindrical portion are made of separate materials and formed integrally.

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5. The spindle motor according to any of claim 1 through claim 3, wherein the support column retaining the stator-side bearing member comprises only a cylindrical portion.

15 6. The spindle motor according to any of claim 1 through claim 5, wherein the chassis has a protruding portion in an area around the cylindrical portion of the support column, and a height of the protruding portion is greater than a height of the stator-side bearing member.

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7. The spindle motor according to any of claim 1 through claim 5, wherein the rotor hub has a protruding portion at an area between a position bearing the rotor-side bearing member and another position bearing the rotor magnet.

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8. The spindle motor according to claim 6, wherein the protruding portion of the chassis is formed into a shape that a part of the

protruding portion extending beyond an upper end of the stator-side bearing member is tapered so that a diameter of the part becomes smaller the more the protruding portion extends above the upper end of the bearing member.

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9. The spindle motor according to any of claim 1 through claim 8, wherein the support column has a threaded portion in a tip end of the cylindrical portion.

10 10. A disk drive unit provided with a spindle motor, the spindle motor comprising:

a chassis;

a rotor magnet;

a rotor-side bearing member;

15 a rotor hub having a hollow circular hole and disposed to the center of rotation;

a support column secured to the chassis; and

a stator having a wound coil and disposed to the chassis in a position confronting the rotor magnet,

20 wherein the support column is disposed to the chassis in a manner to pass through the hollow circular opening in the rotor hub,

the rotor-side bearing member forms a bearing for supporting the rotor hub in combination with a stator-side bearing member disposed to the chassis, and

25 the bearing is disposed to a position of a certain distance from the support column,

the disk drive unit further comprising:

a disk having a recording layer formed on a surface thereof, and disposed to an upper surface of a flange portion of the rotor hub in the spindle motor;

a cover having an abutment portion in abutment on one of tip ends
5 of the cylindrical portion constituting the support column in the spindle motor;

a signal conversion element for recording and reproducing data in the recording layer formed on the disk; and

swing means for positioning the signal conversion element to a
10 predetermined tracking position.

11. The disk drive unit according to claim 10, wherein:

the support column of the spindle motor has a threaded portion in a tip end of the cylindrical portion;

15 the cover is provided with a through hole in a position of the abutment portion corresponding to the threaded portion of the support column; and

the cover is held in abutment on and secured to the tip end of the cylindrical portion of the support column with a screw in the through
20 hole of the cover.

12. The disk drive unit according to any of claim 10 and claim 11 comprising a fluid bearing provided with:

a thrust bearing having a dynamic pressure generating groove
25 formed in any of two axially confronting surfaces of the rotor-side bearing member and the stator-side bearing member, and

a radial bearing having another dynamic pressure generating

groove formed in any of two radially confronting surfaces of the rotor-side bearing member and the stator-side bearing member.

13. The disk drive unit according to any of claim 10 through claim
5 12, wherein the rotor hub and the rotor-side bearing member are formed integrally.

14. The disk drive unit according to any of claim 10 through claim
10 13, wherein the support column retaining the stator-side bearing member comprises a flat portion and a cylindrical portion, and the flat portion and the cylindrical portion are made of separate materials and formed integrally.

15. The disk drive unit according to any of claim 10 through claim
15 13, wherein the support column retaining the stator-side bearing member comprises only a cylindrical portion.

16. The disk drive unit according to any of claim 10 through claim
20 15, wherein the chassis has a protruding portion in an area around the cylindrical portion of the support column, and a height of the protruding portion is greater than a height of the stator-side bearing member.

17. The disk drive unit according to any of claim 10 through claim
25 15, wherein the rotor hub has a protruding portion at an area between a position bearing the rotor-side bearing member and another position bearing the rotor magnet.

18. The disk drive unit according to claim 16, wherein the protruding portion of the chassis is formed into a shape that a part of the protruding portion extending beyond an upper end of the stator-side bearing member is tapered so that a diameter of the part becomes smaller the more the protruding portion extends above the upper end of the bearing member.